



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt
Governor
Robert L. Morgan
Executive Director
Lowell P. Braxton
Division Director

1594 West North Temple, Suite 1210
PO Box 145801
Salt Lake City, Utah 84114-5801
(801) 538-5340 telephone
(801) 359-3940 fax
(801) 538-7223 TTY
www.nr.utah.gov

October 21, 2002

TO: Internal File

THRU: Greg Galecki, Reclamation Hydrologist and Team Lead *AG*

FROM: Susan M. White, Mining Program Coordinator/Biologist *SMW*

RE: Refuse Pile, Canyon Fuel Company, Dugout Canyon Mine, C/007/039-SR02D, Internal File

SUMMARY:

A proposal for a waste rock storage site was submitted to the Division in April of 2002. Requested supplemental information from the completeness review was added August 30, 2002. This memo reviews the biology and land use information received as of August 30, 2002.

TECHNICAL ANALYSIS:

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

HISTORIC AND ARCHEOLOGICAL RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.12; R645-301-411.

Analysis:

A cultural resource survey was performed by Senco-Phenix of the area to be disturbed on June 13, 1998 (attachment 4-1). The area was walk with no more than 50 feet between transects.

TECHNICAL MEMO

One historic site (42CB-1243) and two isolated prehistoric findings were discovered. None of these sites or findings are eligible for nomination to the historic register.

There are no cemeteries, public parks, or units of the National System of Trails or the Wild and Scenic Rivers System located within or adjacent to the refuse pile permit area.

Findings

Information provided meets the minimum Historic and Archeological Resource requirements of the regulations

VEGETATION RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.19; R645-301-320.

Analysis:

The information provided in the current MRP and the application is contradictory and confusing and must be corrected. The addition to the permit area is hard to find on the maps provided. A great deal of time was wasted finding basic information in the application.

Two vegetation communities occur within the proposed permit addition. They are black sagebrush/galleta grass and pinyon – juniper (section 321.100). The grasses in the community include Salina wildrye and galleta grass. The dominant forb is locoweed (section 321.100). RA Attachment 3-1 Vegetation Data notes Astragalus sp. and Unknown forb often. Since this is the dominant forb in the community the locoweed should be identified to species. Legumes are known to fix nitrogen and may be an important forb to reestablish at reclamation.

The application states that vegetation communities are described in the approved MRP. The MRP (page 3-6) reports the pinyon – juniper community to have a cover of 66 percent and 2334 woody species per acre. No description of the black sagebrush/galleta grass plant community could be found in the MRP.

The application states that the proposed site has been previously disturbed for the excavation of gravel. However, vegetation studies (Attachment 3-1) and vegetation maps (Figure 3-1 and 3-2) indicate the site is in fairly good condition. The pinyon-juniper site had 26 percent vegetative cover and 453 woody plants per acre. The black sagebrush/galleta grass community has 40 percent vegetative cover and 2788 woody plants per acre.

Vegetation productivity information was determined by George Cook, at the time a NRCS employee. Productivity of the area adjacent to the disturbed and reference area was 460 pounds per acre (section 321.200). However, Mr. Cook surveyed the topsoil storage area and the borrow area (Attachment 3-1) and not the reference area and refuse pile area. The vegetation

TECHNICAL MEMO

production (annual shrub growth, grass and forb) of the black sagebrush/galleta grass and pinyon-juniper communities must be provided.

Findings:

Information provided in the application is not considered adequate to meet the minimum Vegetation information requirements of the regulations. Prior to approval, the Permittee must provide the following in accordance with:

R645-301-121.200, The information provided in the current MRP and the application is contradictory and confusing and must be corrected. This addition to the permit area is hard to find on the maps provided in the Biology section. A great deal of time was wasted finding basic information in the application. The application is confusing because the term disturbance is confused with coal mining disturbance verses gravel pit disturbance. For proposes of coal mine permitting, disturbance means coal mining disturbance unless otherwise noted.

R645-301-321.200, The vegetation production (annual shrub growth, grass and forb) of the black sagebrush/galleta grass and pinyon-juniper communities must be provided.

R645-301-321.100, No description of the black sagebrush/galleta grass plant community could be found in the MRP. The dominant forb identified as locoweed must be identified to the species level.

FISH AND WILDLIFE RESOURCE INFORMATION

Regulatory Reference: 30 CFR 784.21; R645-301-322.

Analysis:

Two raptor nests have been identified within one mile of the proposed refuse site. Nest number 1 is a ferruginous hawk nest, which was identified as dilapidated in 1998 and has not been surveyed since. Nest number 2 is also a ferruginous hawk nest not surveyed since 1998. The application states that surveys were conducted in 1999 and 2002. The information from DWR shows surveys have not been done in the refuse area since 1998. A one half mile area around the permit area must be surveyed for raptors.

The application states that the area is within critical deer winter range and elk winter range. DWR maps indicate that it is adjacent to year long pronghorn habitat.

TECHNICAL MEMO

The application states that there are no threatened or endangered (T&E) plant and wildlife species within the area to be disturbed. This is based on a letter from DWR in Appendix 3-2 and a vegetation survey report in Appendix 3-1. The purpose of the vegetation survey report was to establish plant community data and not survey for T&E plant species. The letter from DWR in Appendix 3-2 concerns a raptor survey in 1996. A letter from U.S. Fish and Wildlife Service (USFWS), dated April 12, 1996 was found in Appendix 3-2 stating no T&E species. USFWS generally does not provide concurrence six years from the date of the initial application. Additional T&E information is required prior to the Division consulting with USFWS.

The Utah Natural Heritage Program was asked for any information in their database concerning T&E and sensitive species in proposed refuse area. They reported the following on October 21, 2002:

A sighting of an individual lark bunting in 1952--the species is not listed on the state or federal sensitive species lists, but the Utah Natural Heritage Program is "tracking" the species. There are also 3 recent records for ferruginous hawk nests nearby (within ½ -2.25 mi away). Also, a small portion of the area (NW corner) is identified as a critical value deer winter use area.

Findings

Information provided in the application is not considered adequate to meet the minimum Fish and Wildlife Resource Information requirements of the regulations. Prior to approval, the Permittee must provide the following in accordance with:

R645-301-322.200, The application states that surveys were conducted in 1999 and 2002. The information from DWR shows surveys have not been done in the refuse area since 1998, this statement must be changed to provide correct information. A one half mile area around the permit area must be surveyed for raptors.

R645-301-322.220, Information must be provided on threatened and endangered plant and animal species.

LAND-USE RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.22; R645-301-411.

Analysis:

The area to be disturbed has been previously used as a gravel pit, rangeland and wildlife habitat. Adjacent BLM land uses are cattle from November 16 to June 15 for 835 AUM's. Currently the Dugout Canyon Road runs adjacent to the site (section 411.130).

Findings

The information provided meets the minimum Land Use Resource Information requirements of this section

OPERATION PLAN

FISH AND WILDLIFE INFORMATION

Regulatory Reference: 30 CFR Sec. 784.21, 817.97; R645-301-322, -301-333, -301-342, -301-358.

Analysis:

Protection and Enhancement Plan

A protection and enhancement plan cannot be developed until all resource data has been provided.

Endangered and Threatened Species

All resource information has not been provided.

Findings:

Information provided in the application is not considered adequate to meet the minimum Fish and Wildlife Information requirements of the regulations. An Operational protection plan cannot be developed until all resource data has been provided.

VEGETATION

Regulatory Reference: R645-301-330, -301-331, -301-332.

Analysis:

The plan lists an interim seed mixture and specifies that it will be used on the topsoil stockpile and any other areas requiring stabilization prior to final reclamation. The plan should state that all areas not actively being utilized will be planted with an interim seed mixture until establishment and final grading.

TECHNICAL MEMO

Findings:

Information provided in the application is not considered adequate to meet the minimum Vegetation Information requirements of the regulations. Prior to approval, the Permittee must provide the following in accordance with:

R645-301-331, The plan should state that all areas not actively being utilized will be planted with an interim seed mixture until the vegetation becomes established and final grading.

RECLAMATION PLAN

POSTMINING LAND USES

Regulatory Reference: 30 CFR Sec. 784.15, 784.200, 785.16, 817.133; R645-301-412, -301-413, -301-414, -302-270, -302-271, -302-272, -302-273, -302-274, -302-275.

Analysis:

The postmining land use will be wildlife habitat and livestock grazing. This will be achieved through reclamation activities. The surface owner is the same as the Permittee. The suitability of the land to support the postmining land use cannot be assessed until other items baseline and reclamation deficiencies are addressed.

Findings:

A determination of meeting the minimum regulatory requirements of the Postmining Land Uses section will be made after other noted deficiencies are addressed.

PROTECTION OF FISH, WILDLIFE, AND RELATED ENVIRONMENTAL VALUES

Regulatory Reference: 30 CFR Sec. 817.97; R645-301-333, -301-342, -301-358.

Analysis:

The application states that no enhancement measures are planned (Section 342.100).

Findings:

Information provided in the application is not considered adequate to meet the minimum Protection of Fish, Wildlife, and Related Environmental Values requirements of the regulations. Prior to approval, the Permittee must provide the following in accordance with:

R645-301-342.100, Where the plan does not include enhancement measures, a statement will be given explaining why enhancement is not practicable.

REVEGETATION

Regulatory Reference: 30 CFR Sec. 785.18, 817.111, 817.113, 817.114, 817.116; R645-301-244, -301-353, -301-354, -301-355, -301-356, -302-280, -302-281, -302-282, -302-283, -302-284.

Analysis:

Revegetation: General Requirements

Section 341.200 lists the final seed mixture. This seed mixture needs to be refined to more closely match the current vegetation and existing community. Replanting community dominants are important although the Division agrees that the pinyon and juniper can be allowed to naturally invade. The seed mixture quantities are given at rates used in drill seeding. Generally, broadcast seeding rates (includes hand and hydroseeding methods) are double the amount of drill quantities. Normal broadcast seeding rates are 50 to 100 pure live seeds per square foot. The quantities of seed must be reduced to that rate and expressed in broadcast rates since this will be the method used.

The area proposed for the refuse pile is dry and difficult to reclaim. The Soldier Creek mine has a history of cheatgrass invasion on disturbed areas. The operational and final contours of the refuse pile should be designed to maximize soil moisture and minimize evaporation and solar heat. The refuse pile must be redesigned to maximize the east facing slope and minimize the south and southwest facing slopes.

Revegetation: Timing

The vegetation survey found warm season grasses that will need to be seeded separately and prior to the cool season species. The application must address the timing requirements for the various species.

Revegetation: Mulching and Other Soil Stabilizing Practices

The disturbed area will be mulched using 2000 pounds per acre hydromulch (Section 341.200). The application states the area will be left in a roughened state after ripping. The

TECHNICAL MEMO

application must commit to extreme surface roughening technique described in The Practical Guide to Reclamation in Utah.

Revegetation: Standards For Success

The application is confusing concerning what the site currently looks like and this section will not be addressed until all baseline data is technically adequate.

Findings:

Information provided in the application is not considered adequate to meet the minimum Revegetation requirements of the regulations. Prior to approval, the Permittee must provide the following in accordance with:

R645-301-353.100, (1) The seed mixture needs to be refined to more closely match the resource data and existing vegetative community. (2) Normal broadcast seeding rates are 50 to 100 pure live seeds per square foot. The quantities of seed must be reduced to that rate and expressed in broadcast rates since this will be the method used.

R645-301-353.220 and R645-301-354, The vegetation survey found warm season grasses that will need to be seeded separately and prior to the cool season species. The application must address the timing requirements for the various species.

R645-301-553.150, The operational and final contours of the refuse pile must be designed to maximize soil moisture and minimize evaporation and solar heat. The refuse pile must be redesigned to maximize the east-facing slope and minimize the south and southwest facing slopes.

R645-301-340, The application must commit to extreme surface roughening technique described in The Practical Guide to Reclamation in Utah.